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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,937	11/06/2000	Thomas Huber	N0070US	8577

7590 12/19/2003

NAVIGATION TECHNOLOGIES CORPORATION
ATTENTION: PATENT DEPARTMENT
222 MERCHANDISE MART PLAZA
MERCHADISE MART, SUITE 900
CHICAGO, IL 60654

EXAMINER

LE, MIRANDA

ART UNIT	PAPER NUMBER
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2177

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/706,937

Applicant(s)

HUBER ET AL.

Examiner

Miranda Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/30/2003 has been entered.
2. This communication is responsive to Amendment A, filed 10/30/2003.
3. Claims 1-14 are pending in this application. Claims 1, 4-9 are independent claims. In the Amendment A, claims 1, 2, 14 have been amended. This action is made non-Final.

Drawings

4. The drawings filed on 11/06/2000 are not **approved** by the Draft person under 37 CFR 1.84 or 1.152 for the reasons submitted in Form PTO 948, which was included in paper No. #7.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless:

(e) the invention was described in

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

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351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 5-9, 12-13, 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Smartt et al. (US Patent No. 6,470,287 B1).

Smartt anticipated independent claims 1, 19, 25, by the following:

As per claim 1, Smartt teaches “an index for data that represent geographic features comprising: a structure that includes three dimensions” at col. 27, lines 15-33;

“wherein a first dimension of said three dimensions includes latitude boundary information, a second dimension of said three dimensions includes longitude boundary information, said first dimension and second dimension are searchable spatially” at col. 18, lines 10-31, col. 20, lines 17-31, col. 23, lines 18-34;

“wherein a third dimension includes non-spatial property information, said third dimension is searchable for a non-spatial property of the geographic features represented by the data” at col. 15, lines 32-45, col. 16, lines 53-64, col. 24, lines 48-61.

As per claim 2, Smartt teaches “an index for data that represent geographic features comprising: a structure that includes two spatial dimensions and a non-spatial third dimensions” at col. 23, lines 45-65, col. 24, lines 1-45, col. 7, lines 28-41;

“whereby said data indexed by said structure are searchable spatially using said two spatial dimensions” at col. 18, lines 10-31;

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“whereby a non-spatial property of the data that represent the geographic features is searchable using said third dimension” at col. 27, lines 15-33, col. 23, lines 45-65, col. 24, lines 1-45.

As per claim 14, Smartt teaches “an index for data comprising: a structure that includes a first dimension, a second dimension and a third dimension whereby said data indexed by said structure are searchable using said first and second dimensions” at col. 23, lines 18-34, col. 18, lines 10-31, col. 20, lines 17-31, col. 27, lines 15-33,

“whereby a granularity of the indexed data is searchable using said third dimension” at col. 25, lines 6-58.

As per claim 3, Smartt teaches “said structure is a k-d-tree index structure comprising a root node, intermediate nodes and leaf nodes, wherein each node is part of a parent-child relationship wherein each parent node includes control information from which one of at least two child nodes associated with the parent node are distinguishable based on a search key” at col. 23, lines 45-65, col. 24, lines 1-45, col. 25, lines 58 to col. 26, line 16.

As per claim 5, Smartt teaches “improved index is non-homogeneous” at col. 23, lines 45-65, col. 25, lines 58 to col. 26, line 16.

As per claim 6, Smartt teaches “geographic features are roads” at col. 29, lines 16-24.

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As per claim 7, Smartt teaches “property is a rank of the geographic features represented by the indexed data” at col. 25, lines 6-58.

As per claim 8, Smartt teaches “rank includes both integers and fractional values” at col. 25, lines 6-58.

As per claim 9, Smartt teaches “property is a granularity of the indexed data” at col. 25, lines 6-58.

As per claim 12, Smartt teaches “property is an expiration date associated with the indexed data” at col. 6, lines 55-65.

As per claim 13, Smartt teaches “property is a creation date associated with the indexed data” at col. 6, lines 55-65.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 4, 11, are rejected under 35 U.S.C. 103(a) as being unpatentable over Smartt et al. (US Patent No. 6,470,287 B1), in view of Evans et al. (US Patent No. 6,327,535 B1).

As per claim 4, Smartt does not explicitly teach “improved index is homogeneous”.

However, Evans teaches this limitation at col. 12, lines 23-45, col. 4, lines 31-41.

Thus, it would have been obvious to one ordinarily skilled in the art at the time of the invention to combine the teachings of Smartt with the teachings of Evans to include “improved index is homogeneous” in order to enable proximity calculations to be computed in a fast and straight forward manner.

As per claim 11, Smartt does not explicitly teach “property is a scale associated with the indexed data”. However, Evans teaches this limitation at col. 6, line 66 to col.7, line 13, col. 24, lines 20-40.

Thus, it would have been obvious to one ordinarily skilled in the art at the time of the invention to combine the teachings of Smartt with the teachings of Evans to include “property is a scale associated with the indexed data” in order to provide a uniform way of defining locations.

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9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smartt et al. (US Patent No. 6,470,287 B1), as applied to claims above, in view of Rutledge et al. (US Patent No 6,650,998 B1).

As per claim 10, Smartt does not explicitly teach “property is a viewing altitude associated with the indexed data”. However, Rutledge teaches this limitation at col. 9, lines 11-41, Fig. 5.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to combine the teachings of Smartt with the teachings of Rutledge to include “property is a viewing altitude associated with the indexed data” in order to allow a user to be able to pan, zoom, and jump to various locations, and thus to be able to precisely specify the geographical area of interest, defined in terms of a range of latitude and longitude coordinates.

Response to Arguments

10. Applicant's arguments regarding Kothuri does not disclose "the third dimension is searchable for a non-spatial property of the geographic features represented by the data" with respect to claims 1, 2, 14 have been considered but are moot in view of the new ground(s) of rejection.

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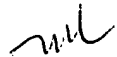
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

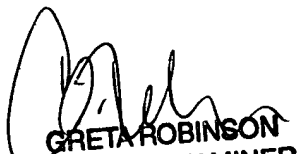
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miranda Le whose telephone number is (703) 305-3203. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (703) 305-9790. The fax number to this Art Unit is (703) 872-9306. The TC 2100's Customer Service number is (703) 306-5631.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.



Miranda Le
December 12, 2003



GRETA ROBINSON
PRIMARY EXAMINER